

ABSTRACT OF THE DISCLOSURE

SPECTRUM DIVISION MULTIPLEXING FOR HIGH CHANNEL COUNT OPTICAL NETWORKS

[0132] An optical interleaver comprising: an interferometer which includes a coupler, a first phase shifter and a combiner; wherein the coupler splits incident light into a first light beam and a second light beam and couples the first light beam and the second light beam to the first phase shifter; wherein the first phase shifter includes a first light propagation element that propagates the first light beam along a first path between the coupler and the combiner and that includes a second light propagation element that propagates the second light beam along a second path between the coupler and the combiner, the first and second paths having different path lengths that contribute to a phase shift between light of the first light beam propagated along the first path and light of the second light beam propagated along the second path; wherein the combiner couples the first light beam with and the second light beam; a second phase shifter which receives first light beam light propagated along the first path between the coupler and the combiner and imparts a first wavelength dependent variation in phase to the received first light beam light; a third phase shifter which receives second light beam light propagated along the second path between the coupler and the combiner and imparts a second wavelength dependent variation in phase to the received second light beam light.